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(71) Applicant *(for all designated States except US)*: **KONINKLIJKE PHILIPS ELECTRONICS N.V.** [NL/NL]; Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **LEENAERTS, Dominicus, M., W.** [NL/NL]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL). **PAVLOVIC, Nenad** [YU/NL]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL). **MISTRY, Ketan** [GB/GB]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).

(74) Agent: **ELEVELD, Koop, J.**; Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).

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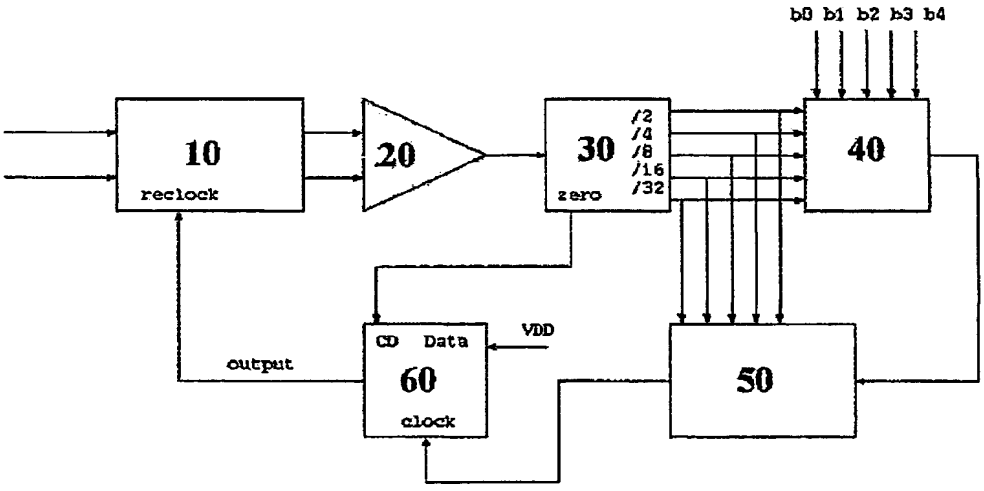
(54) Title: PHASE-SWITCHING DUAL MODULUS PRESCALER



(57) Abstract: A phase-switching dual modulus prescaler having a dual modulus divider is provided. Said divider comprises a first and second divide-by-2 circuit (A;B), wherein said second divide-by-2 circuit (B) is coupled to the output of said first divide-by-2 circuit (A) and at least said second divide-by-two circuit (B) comprises a four phase output each separated by 90°. A phase selection unit (PSU) is provided for selecting one of the four phase outputs (I_p, I_n, Q_p, Q_n; INi, INni, INq, Innq) of the second divide-by-2 circuit (B). Moreover, a phase control unit is provided for providing control signal (C1, NC0; C2, NC2; C3, NC3) to the phase selection unit, wherein the phase selection unit (PSU) performs the selection of the four phase outputs(I_p, I_n, Q_p, Q_n; INi, INni, INq, Innq) according to the control signals (C0, NC0; C1, NC1; C2, NC2). Said phase selection unit (PSU) is implemented based on direct logic. The implementation of the phase selection unit based on direct logic enables a higher speed and saves area on the chip.

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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.